

**What is Claimed**

1. An optical reader having an image sensor, and an illumination system, said reader comprising:

generating circuit for generating an array of multibit pixel values;

establishing circuit for establishing max and min peak tracking lines for said array of pixel values;

subjecting circuit for subjecting said array of multibit pixel to a peak characterizing data development routine, wherein said subjecting circuit including circuit for sensing peaks of said array of pixel values using interactively aggressive peak sensing thresholds;

developing circuit responsive to said subjecting circuit for developing peak characterizing data characterizing peaks of said array of multibit pixel values;

determining circuit for determining a plurality of digitization parameters based on said developed peak characterizing data, wherein said plurality of digitization parameters include a peak sensing threshold parameter, and grey band position parameters; and

finding circuit for finding edge positions represented by said array of pixel values utilizing said plurality of digitization parameters.

2. The reader of claim 1, wherein said generating circuit generates an array of pixel values corresponding to a row of pixels of a 1D image sensor.

3. The reader of claim 1, wherein said generating circuit generates an array of pixels corresponding to a line of pixels of a 2D image sensor.

4. The reader of claim 1, wherein said establishing circuit comprises circuitry for establishing a forward tracking line, a backward direction trackline line, and circuit for compositing said forward and backward tracking lines.

5. The reader of claim 1, wherein said subjecting circuit includes circuitry for subjecting said array of pixel values to peak sensing thresholds that depend on a difference between said max and min peak tracking lines.

6. The reader of claim 1, wherein said subjecting circuit includes circuitry for subjecting said array of pixel values to a first peak sensing threshold, a second peak sensing threshold, and a third peak sensing threshold.

7. The reader of claim 1, wherein said determining circuitry determines said digitizing peak sensing threshold to be a previous data development peak sensing threshold if a present data development peak sensing threshold senses no new peaks.

8. The reader of claim 1, further comprising a calculating circuit for calculating an average max peak value and an average min peak value.

9. The reader of claim 1, further comprising a calculating circuit for calculating an average max peak value and an average min peak value, wherein said finding circuit is responsive to said calculating circuit.

10. The reader of claim 1, further comprising a calculating circuit for calculating an average max peak value and an average min peak value, wherein said finding circuit is responsive to said calculating circuit.